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PATENT DOCKET ADMINISTRATION RE/R11/A109
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EXAMINER	
MOORE, IAN N	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/631,269	HEATH ET AL.	
	Examiner	Art Unit	
	Ian N Moore	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-12,14,16-21,23-29,31,33-38,40-46,48,50 and 51* is/are rejected.

7)☒ Claim(s) *5,13,15,22,30,32,39,47 and 49* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. In view of the appeal brief filed on 3-1-2005, PROSECUTION IS HEREBY REOPENED. The new ground of rejection is set forth below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 6,16,18,23,33,35,40 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prieto (U.S. 6,381,228) in view of Lam (U.S. 6,198,724).

Regarding Claim 1, Prieto discloses a method of performing bandwidth allocations, the method comprising:

receiving a bandwidth request from a terminal (see Fig. 2, Step 2, local UET sends reservation request through SRC to Satellite; also see col. 6, line 56-58 and col. 9, line 39-41; note that a Reservation Query Message (RQM) (i.e. bandwidth request) is received from a user earth terminal (i.e. a terminal));

determining bandwidth request type and priority of the received bandwidth request (see Fig. 2, step 4, Satellite Controller process Request; see col. 4, lines 55-60; see col. 7, lines 58-65; col. 9, line 5-9 and line 41-44; note that the MAC controller sets/determines the reservation query message based upon the type (i.e.

request type) and service class of user (i.e. priority) and the portions of the requested bandwidth);

placing the bandwidth request (see FIG. 5, placing requests) in one of a plurality of a global queues (see Fig. 4 and 5, a plurality of a Wholesaler selection queues 58 at Stage 1; see col. 4, lines 55-63; also see col. 9, line 32-34; the controller stores/queues RQM/ATM reservation request into a wholesaler queue) based upon the determining step, each of the global queues corresponding to each of a plurality of channels (see Fig. 4, Uplink channels; and see col. 9, line 41-44; note that each wholesaler selection queue is dedicated to each channel per user);

moving the bandwidth request from the one global queue to one of a plurality of local queues (see Fig. 4 and 5; a plurality of retailer queues 60; and col. 9, line 46 to col. 10, lines 9; note that a RQM request is selected/moved from a wholesaler queue to retailer queue), the plurality of local queues corresponding to the plurality of channels (see Fig. 4, Uplink channels 1, 2, 3; and col. 9, line 34-36; note that each retailer queue is dedicated for each retailer user (i.e. one user per channel)), wherein the bandwidth request is moved based on loading of the channels (see col. 9, lines 25-36; see col. 10, lines 1-9; note that the backlogged/loaded RQM is transferred/moved based upon backlogging/loading); and

allocating the transmission slots in response to the bandwidth request stored in the one local queue (see Fig. 2, step 4, Satellite Controller generates Reply message, RGM; also see col. 9, line 55-56 and col. 10, line 5-7; note that the

request placed it in the retailer queue is granted by reserving/allocating the quanta/resources/slots.)

Prieto does not explicitly disclose each of the global queues corresponding to a data rate. However, Lam teaches each of the global queues (see FIG. 2, Rate queues 230a-p) corresponding to a data rate (see col. 5, lines 32-65; see col. 6, lines 20-40); and moving based on loading (see col. 7, lines 9-65; a scanner 20 moves/selects the cell in the rate queues based on its filling. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a data queues corresponding to a data rate, as taught by Lam in the system of Prieto, so that it would efficiently schedule cells for transmission and avoid transmission of late cells; see Lam col. 3, line 15-67.

Regarding Claim 18, a communication system claim which substantially all the limitations of the respective method claim 1, with a bandwidth control processor (BCP) (Fig. 4, Medial Access Controller, MAC Controller 50) couple to global queues. Therefore, they are subjected to the same rejections.

Regarding Claim 35, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 1. Therefore, they are subjected to the same rejections.

Regarding Claim 6, the combined system of Prieto and Lam discloses the global queues in the placing step as described above in Claim 1. Prieto further discloses the bandwidth request is at least one of a rate request type (col. 7, line 1-

60; see col. 9, lines 39-65; RQM with subscription rate) and associated priority (see col. 4, lines 55-60; see col. 7, lines 58-65; col. 9, line 5-9 and line 41-44; priority). Lam also discloses the bandwidth request is at least one of a rate request type and associated priority (see FIG. 3A, step 322,324,308; request type and priority; see col. 7, lines 10 to col.8, lines 6).

Regarding Claim 16, Prieto discloses receiving a plurality of volume requests (see col. 6, line 57-60; note that DAMA controller at the satellite queues the bandwidth requests); and spreading the volume requests across each of the local queues (see Fig. 4, the bandwidth requests are distributed/spread according to each retailer queue; see col. 9, lines 25 to col. 10, lines 10).

Regarding Claim 23, a communication system claim which substantially all the limitations of the respective method claim 6. Therefore, they are subjected to the same rejections.

Regarding Claim 33, a communication system claim which substantially all the limitations of the respective method claim 16. Therefore, they are subjected to the same rejections.

Regarding Claim 40, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 6. Therefore, they are subjected to the same rejections.

Regarding Claim 50, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the

limitations of the respective method claim 16. Therefore, they are subjected to the same rejections.

4. Claim 2, 19, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prieto in view of Lam as applied to claim 1, 18 and 36 above, and further in view of Natarajan (U.S. 5,699,355).

Regarding Claim 2, Prieto discloses the bandwidth request is at least one of a rate request (col. 7, line 1-60; see col. 9, lines 39-65; RQM with subscription rate). Neither Prieto nor Lam explicitly discloses specifying a constant number of transmission slots. However, Natarajan discloses the rate request specifying a constant number of transmission slots (see FIG. 4, step 40-67; a rate request for 37 slots).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a request specifying 37 slots per frame, as taught by Natarajan, in the combined system of Prieto and Lam, so that it would enable satellite link access bandwidth to be efficiently shared among a completing users; see Natarajan col. 1, line 15-50.

Regarding Claim 19, a communication system claim which substantially all the limitations of the respective method claim 2. Therefore, they are subjected to the same rejections.

Regarding Claim 36, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the

limitations of the respective method claim 2. Therefore, they are subjected to the same rejections.

5. Claim 3, 4, 20, 21, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prieto in view of Lam as applied to claim 1, 18 and 36 above, and further in view of Bahls (U.S. 5,893,924).

Regarding Claim 3, Prieto discloses the bandwidth request is a rate request (col. 7, line 1-60; see col. 9, lines 39-65; RQM with subscription rate), and filling the one local queue with subsequent rate requests up to a queuing threshold and filling another one of the local queue with addition rate request (col. 9, line 46 to col. 10, lines 9; see FIG. 4 and 5, each RQM is filled/loaded in each retailer queue up to its threshold (i.e. each queue must have a threshold)). Neither Prieto nor Lam explicitly discloses upon filling the one local queue beyond the queuing threshold. However, Bahls discloses filling the one local queue (see FIG. 1, a queue in the primary storage medium 106) with the rate requests (see col. 4, lines 15-20; requests) up to a queuing threshold (also see FIG. 3A; step 308, exceeding primary queue threshold; see col. 4, lines 15-50); and

filling another one of the local queues (see FIG. 1, a queue in the overflow storage medium) with additional rate requests (see col. 4, lines 15-20; requests) upon filling the one local queue beyond the queuing threshold (also see FIG. 3A; step 308, 310, 312, 314; upon exceeding primary queue threshold, moving the request to overflow queue; see col. 4, lines 15 to col. 5, lines 16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to move the data to overflow queue/storage upon exceeding the primary queue/storage threshold, as taught by Bahls, in the combined system of Prieto and Lam, so that it would minimize the impact of a queue full conditions; see Bahls col. 1, line 40-65.

Regarding Claim 4, Prieto discloses the queuing threshold in the step of filling the one local queue is predetermined (note that the queue/buffer has a predefined filling threshold). Bahls also discloses the queuing threshold in the step of filling the one local queue is predetermined (see FIG. 3A; step 308, 310, 312, 314; see col. 4, lines 15 to col. 5, lines 16).

Regarding Claim 20, a communication system claim which substantially all the limitations of the respective method claim 3. Therefore, they are subjected to the same rejections.

Regarding Claim 21, a communication system claim which substantially all the limitations of the respective method claim 4. Therefore, they are subjected to the same rejections.

Regarding Claim 37, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 3. Therefore, they are subjected to the same rejections.

Regarding Claim 38, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the

limitations of the respective method claim 4. Therefore, they are subjected to the same rejections.

6. Claim 7, 10-12,14,24,27-29,31, 41,44-46 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prieto in view of Lam as applied to claim 1, 18 and 36 above, and further in view of Montpetit (U.S. 6,366,761).

Regarding Claim 7, neither Prieto nor Lam does not explicitly disclose high priority rate request, a low priority rate request, a high priority volume request, and a low priority volume request. However, Montpetit '761 teaches high priority rate request (see Fig. 6, P1 130; col. 6, line 3-14; col. 8, line 6-21; note that a high priority rate allocation request is assigned as P1 class), a low priority rate request (see Fig. 6, P3 132; col. 6, line 23-33; col. 8, line 32-57; note that a low priority rate-based bandwidth allocation request is assigned as P3 class), a high priority volume request (see Fig. 6, P2 131; col. 6, line 15-22; col. 8, line 6-21; note that a high priority volume allocation request is assigned as P2 class), and a low priority volume request (see Fig. 6, P4 132; col. 6, line 33-41; col. 8, line 32-57; note that a low priority volume-based bandwidth allocation request is assigned as P4 class.)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to classify/prioritize the bandwidth request type and priority of requests into more specific the bandwidth rate-based allocation requests and volume-based allocation request, as taught by Montpetit, in the combined system of Prieto and Lam, so that it would enable the data transmission to meet or

exceed a user-selected standard of data transmission service, and different data packets in a data transmission may be assigned different levels of priority status so that the overall data transmission meets or exceeds the selected quality of service; see Montpetit col. 2, line 53 to col. 3, lines 2.

Regarding Claim 10, Prieto discloses the pluralities of channels are designated as data channels that are sequentially ordered (see Fig. 4, plurality of data channels in Uplink Bands and they sequentially order from 1 to U links/channels);

selectively assigning the transmission slots according to a prescribed order of the data channels (see col. 10, lines 1-10; order defined by Scheduler 64; also see col. 9, line 55-56 and col. 10, line 5-7; note that the request placed it in the retailer queue is granted by reserving/allocating the quanta/resources/slots).

Prieto does not explicitly disclose based upon the bandwidth request type.

However, Montpetit teaches the allocating step comprising: selectively assigning the transmission slots according to a prescribed order of the data channels based upon the bandwidth request type (see col. 7, line 49 to col. 8, line 40; note that uplink channels/slots are assigned/allocated according to two different formats of bandwidth allocation requests in the predetermined/prescribed order).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to allocate/assign according to bandwidth request type, as taught by Montpetit, in the combined system of Prieto and Lam, so that it would enable the data transmission to meet or exceed a user-selected standard of

data transmission service, and different data packets in a data transmission may be assigned different levels of priority status so that the overall data transmission meets or exceeds the selected quality of service; see Montpetit col. 2, line 53 to col. 3, lines 2.

Regarding Claim 11, Montpetit discloses assigning the first data channel if the bandwidth request type is rate request (see Fig. 6, P1 where P1 is the first high priority rate request queue/buffer; col. 6, line 3-14; and see Fig. 7, Bandwidth allocation table, where GT1 P1 is the first bandwidth allocation request being stored/assigned in the table; col. 14, line 4-19; note that high priority rate request is being stored/assigned as in the first channel/slot in the bandwidth allocation table (row frequency f1 and time t1)).

In view of this, having the combined system of Prieto and Lam and then given the teaching of Montpetit, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Prieto and Lam, by providing a mechanism to allocate/assign each rate request in the first uplink data slot/channel according to the different priorities/classes, as taught by Montpetit, for the same motivation as stated above in Claim 10.

Regarding Claim 12, Montpetit discloses assigning the last data channel if the bandwidth request type is volume request (see Fig. 6, P4 where P4 is the last low priority volume request queue/buffer; col. 6, line 33-41; and Fig. 7, Bandwidth allocation table, where GT3 P4 is the last volume-based bandwidth allocation request being stored/assigned in the table; col. 14, line 4-19; note that low priority

volume request is being stored/assigned as in the last channel/slot in the bandwidth allocation table (row frequency f4 and time t2)).

In view of this, having the combined system of Prieto and Lam and then given the teaching of Montpetit, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Prieto and Lam, by providing a mechanism to allocate/assign each volume request in the last uplink data slots/channels according to the different priorities/classes, as taught by Montpetit, for the same motivation as stated above in Claim 10.

Regarding Claim 14, the combined system of Prieto '228 and Montpetit '761 discloses receiving the plurality of bandwidth requests as described above in Claim 1. Prieto '228 discloses associating the follow-up volume request (see col. 4, lines 40-65; col. 6, line 45-60; see col. 9, lines 39-65; RQM to request bandwidth/volume/slots) with the original request and placing the bandwidth requests to a particular local queue that stored the original request among the plurality of local queues (see Fig. 4 retailer queues 60 where each user's request is identified by its own respective queue. Thus, the original request and next request (i.e. a follow-up request) must be first related then placed right next to each other in sequential order in the respective retailer queues because each retailer queue uniquely stores each user request). Montpetit '761 teaches receiving volume requests (see col. 9, line 5 to col. 8, line 9-16 and col. 9, line 26-39; note that the plurality of volume-based bandwidth requests are transmitted/received between user terminal and satellite.)

Regarding Claim 24, a communication system claim which substantially all the limitations of the respective method claim 7. Therefore, they are subjected to the same rejections.

Regarding Claim 27, a communication system claim which substantially all the limitations of the respective method claim 10. Therefore, they are subjected to the same rejections.

Regarding Claim 28, a communication system claim which substantially all the limitations of the respective method claim 11. Therefore, they are subjected to the same rejections.

Regarding Claim 29, a communication system claim which substantially all the limitations of the respective method claim 12. Therefore, they are subjected to the same rejections.

Regarding Claim 31, a communication system claim which substantially all the limitations of the respective method claim 14. Therefore, they are subjected to the same rejections.

Regarding Claim 41, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 7. Therefore, they are subjected to the same rejections.

Regarding Claim 44, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the

limitations of the respective method claim 10. Therefore, they are subjected to the same rejections.

Regarding Claim 45, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 11. Therefore, they are subjected to the same rejections.

Regarding Claim 46, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 12. Therefore, they are subjected to the same rejections.

Regarding Claim 48, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 14. Therefore, they are subjected to the same rejections.

7. Claim 8,9, 25,26, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prieto in view of Lam as applied to claim 1, 18 and 36 above, and further in view of Murakami (U.S. 66,212,164).

Regarding Claim 8, Prieto discloses the bandwidth request and the plurality of channels as described above in claim 1. Prieto further disclose a volume request (see col. 4, lines 40-65; col. 6, line 45-60; see col. 9, lines 39-65; RQM to request bandwidth/volume/slots) and it is received over at least one of a contention channel

(see FIG. 1, Network access channel NAC for connection request) and a data channel (see FIG. 1, data channels), the method further comprising:

receiving a piggybacked volume request over the data channel (see col. 7, line 18-25; note that UET (user equipment terminal) utilizes a current data stream to piggyback more bandwidth resource request instead of sending a new RQM request message);

placing the piggybacked request in a corresponding one of the global queues (see Fig. 4, a plurality of a Wholesaler selection queues 58 at Stage 1; also see col. 9, line 32-34; the controller stores/queues the reservation request into a wholesaler queue.)

Neither Prieto nor Lam explicitly discloses determining whether or not oversubscribed; and selectively discarding the request based upon the step of determining whether or not oversubscribed. However, Marakami teaches determining whether the plurality of channels (see FIG. 4, number of connections 446) are oversubscribed (see FIG. 5, step 510 and 520; see col. 7, lines 45-65; determining whether connection T (x) is more or less than counter C(x) for congestion due to overloading/over-SETUP); and

selectively discarding the volume request based upon the step of determining whether the plurality of channels are oversubscribed (see FIG. 5, step 520 and 460A; see col. 7, lines 45-65; discarding the SETUP request message when there is a congestion due to overloading/over-SETUP).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine whether there is a congestion due to overload/over-SETUP, discarding when there is congestion due to overload/over-SETUP, as taught by Marakami, in the combined system of Prieto and Lam, so that it would enable handing of the connection setup request from the ATM devices without being influenced by congestion that has occurred, and establish the connection efficiently; see Marakami col. 2, line 30 to col. 3, lines 50.

Regarding Claim 9, Prieto discloses filling the plurality of local queues up to a queuing threshold (col. 9, line 46 to col. 10, lines 9; see FIG. 4 and 5, each RQM is filled/loaded in each retailer queue up to its threshold (i.e. each queue must have a threshold)). Marakami discloses determining whether oversubscribed/overload/congested upon exceeding a respective threshold (see FIG. 5, step 520 and 460A; see col. 7, lines 45-65; discarding the SETUP request message when there is a congestion due to overloading/over-SETUP when exceeding the threshold, $T(x)<C(x)$).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to determine there is a congestion due to overload/over-SETUP by exceeding the threshold, as taught by Marakami, in the combined system of Prieto and Lam, for the same motivation as described above in claim 8.

Regarding Claim 25, a communication system claim which substantially all the limitations of the respective method claim 8. Therefore, they are subjected to the same rejections.

Regarding Claim 26, a communication system claim which substantially all the limitations of the respective method claim 9. Therefore, they are subjected to the same rejections.

Regarding Claim 42, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 8. Therefore, they are subjected to the same rejections.

Regarding Claim 43, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 9. Therefore, they are subjected to the same rejections.

8. Claim 17, 34 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prieto in view of Lam as applied to claim 1, 18 and 36 above, and further in view of Hatano (U.S. 5,959,991).

Regarding claim 17, the combined system of Prieto and Lam discloses the local queues and the volume requests in the respective local queue, and respective predetermined thresholds corresponding to the local queues as described above in Claim 1 and 16.

Neither Prieto nor Lam explicitly discloses each queue has a counter that counts a quantity of the requests in the respective queue, the distributing step comprising: comparing counter values of the counters with respective predetermined thresholds.

However, Hatano teaches each local queue (see FIG. 3, buffer 130-1 to 130-n) has a counter (see FIG. 3, Queue length counter 131-1 to 131-n) that counts a quantity of the requests in the respective queue (see FIG. 3, cells in the buffer 130-1 to 130-n; see col. 11, line 16-41), the distributing step comprising:

comparing counter values of the counters (see FIG. 3, comparator circuit 132-1 to 132-n) with respective predetermined thresholds corresponding to the queues (see FIG. 3, buffer threshold value 133-1 to 133-n; see col. 10, lines 60 to col. 11, lines 5; see col. 11, lines 60 to col. 12, lines 10; comparing counts with a buffer threshold value).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide each buffer/queue with a counter that counts the cells in the buffer and comparing the counts with the buffer threshold, as taught by Hatano, in the combined system of Prieto and Lam, so that it would suppress the cell loss probability through adaptive control of the buffer threshold value depended on the cell traffic characteristic; see Hatano col. 2, line 24-42.

Regarding Claim 34, a communication system claim which substantially all the limitations of the respective method claim 17. Therefore, they are subjected to the same rejections.

Regarding Claim 51, a computer readable medium containing program instructions for executing on a computer system, which that substantially all the limitations of the respective method claim 17. Therefore, they are subjected to the same rejections.

Allowable Subject Matter

9. Claims 5, 13, 15,22,30,32,39.47 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N Moore whose telephone number is 571-272-3085. The examiner can normally be reached on M-F: 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

INM
JNM
4/28/05

BOB PHUNKULH
PRIMARY EXAMINER